

(TRANSLATION)  
PATENT COOPERATION TREATY  
PCT  
INTERNATIONAL SEARCH REPORT  
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>W2015-000000</b>	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. <b>PCT/JP2004/019116</b>	International Filing date ( <i>day/month/year</i> ) <b>21. 12. 2004</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>26. 12. 2003</b>
Applicant: <b>Hitachi, Ltd.</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of:

☐ the international application in the language in which it was filed

☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (see Box No. II).

3. ☒ Unity of invention is lacking (see Box No. III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. I

☐ as suggested by the applicant

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/019116

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> B81B1/00, B29C33/38, B81C1/00, B82B1/00, 3/00, H01L21/027

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> B81B1/00, B29C33/38, B81C1/00, B82B1/00, 3/00, H01L21/027

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2005
Kokai Jitsuyo Shinan Koho	1971-2005	Toroku Jitsuyo Shinan Koho	1994-2005

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 2002-219587 A (Vacuum Metallurgical Co., Ltd.), 06 August, 2002 (06.08.02), Par. Nos. [0002], [0010] (Family: none)	1
A	JP 2001-29761 A (Atene Kabushiki Kaisha), 06 February, 2001 (06.02.01), Full text (Family: none)	1



Further documents are listed in the continuation of Box C.



See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

12 April, 2005 (12.04.05)

Date of mailing of the international search report

26 April, 2005 (26.04.05)

Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/019116

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The invention of claim 1 relates to microprojections having an aspect ratio of greater than 1.

The invention of claims 2 and 3 relates to microprojections of an alloy containing a nonmetallic element as an accessory component.

The invention of claim 4 relates to a fine metal structure comprising microprojections having their surface furnished with a single coating layer.

The invention of claim 5 relates to a fine metal structure comprising microprojections having, immobilized directly or indirectly on surfaces thereof, at least one organic matter selected from among an antigen, an antibody, a protein, a base, (continued to extra sheet)

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/019116

Continuation of Box No. III of continuation of first sheet (2)

a sugar chain and a surface modifier.

The invention of claims 6-11 and 18-21 relates to a process comprising providing a substrate having a fine rugged pattern on its surface, applying a molecular electroless catalyst to the surface, thereafter carrying out electroless plating to thereby form a metal layer, and detaching the metal layer from the substrate to thereby attain reversal transfer of the rugged pattern.

The invention of claims 12-17 relates to having at least part of the surface of microprojections furnished with at least one coating layer constituted of a component different from that constituting the microprojections.

The invention of claim 22 relates to a metal mold.

The invention of claim 23 relates to a nanoimprinting device.

The invention of claim 24 relates to an electrode.

The invention of claim 25 relates to a microchip having a detection part furnished with minute projections.

The invention of claim 26 relates to a microchip having, immobilized on the surface of the substrate thereof, a substance capable of interacting with an analyte.

The invention of claim 27 relates to a DNA chip.

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